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GLENN C. BROWN, PC 777 NW WALL STREET, SUITE 308 BEND, OR 97701			CUNNINGHAM, TERRY D	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 04192004

Application Number: 10/072,676  
Filing Date: February 07, 2002  
Appellant(s): VICE, MICHAEL WENDELL

\_\_\_\_\_  
Glenn C. Brown  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 16 January 2004.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1 and 2.

Claims 3-25 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

See Issues section below for explanation of change of Claim Status.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

Examiner notes that contrary to Applicant's remarks in this section, interview was held with Applicant's representatives in March 2004. Clarification of the rejection was provided and agreement concerning claim 3 was made.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

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**(6) Issues**

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

With respect to the rejection under 35 U.S.C. § 112, first paragraph, Examiner has considered Appellant's remarks and has found such to be persuasive.

With respect to the rejection under 35 U.S.C. § 112, second paragraph, agreement was made to overcome the rejection by Examiner's Amendment following disposition by the Board of Appeals. It was agreed to amend claim 3 similarly as follows:

Claim 3, line 2, --a secondary unit, said second having-- will be inserted following "has" and

line 3, "said secondary winding" will be changed to --said secondary unit--.

Thus, the remaining issue is issue A. Whether claims 102 are unpatentable under 35 U.S.C. § 102(b).

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims 1-2 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8). Note, remaining groupings are moot based on the change in Issues.

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

5,013,931

Estes, Jr.

05-1991

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**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. §102(b) as being anticipated by Estes, Jr. (USPN 5,013,931). Estes, Jr. discloses, in Fig. 2, a circuit comprising: “an isolation transformer (35) having a primary winding (on left) and a first secondary winding (on right), said primary winding for receiving power from a source of alternating current power (12, 30, 32, 165 and 166); and a feedback control loop (remainder of circuit) comprised of a voltage reference (ground), “an output sampler (136, 138, 140a, 140b, and 168), and an amplifier (175), said output sampler functioning to provide a scaled sampling (elements 138, 140a and 140b clearly sample the output and provide a scaled version thereof) of the output voltage (VOUT) of said power line conditioner to a first input (inverting input, via 168) of said amplifier (175), said voltage reference (ground) connected to provide a desired voltage (zero volts) to a second input (non-inverting input) of said amplifier (175); an output of said amplifier connected (via 167, 138 and 136) to a first terminal (top terminal) of said isolation transformer (34), and a second terminal (bottom terminal) of said first secondary winding of said isolation transformer (34) connected to an input (at 140a) of said input sampler, said second terminal (bottom terminal) of said first secondary winding of said isolation transformer (34) also constituting the output

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(VOUT) of said power line conditioner”. Figure 2 of Estes, Jr. also expressly shows the “first port” (the port at the primary) and the “second port” (the port at the secondary).

**(11) Response to Argument**

On page 10, line 2, Appellant begins stating the basis of the argument being “Estes, Jr. does not disclose each and every element of the invention of either claim 1 or claim 2, and does not render either claim 1 or claim 2 invalid under 35 U.S.C. § 102(b).” The remaining arguments provide specifics in an attempt to disprove the rejection. Examiner will respond to each point hereinafter.

Appellant’s first point in the second full paragraph of page 10 is as follows:

Estes, Jr. does not disclose “an isolation transformer having a primary winding and a first secondary winding, said primary winding for receiving power from a source of alternating current power”, and in fact includes no isolation transformer whatsoever.

Appellant cites a portion of Estes, Jr. and then goes on to erroneously conclude:

The transformer of Estes, rather than serving as an isolation transformer having a primary winding for receiving an input from a source of alternating current, it serves to source to receive the inverting and non-inverting square wave outputs of amplifiers 30 and 32, and to charge capacitor 40 in synchronism with the square wave voltage across the transformer 34.

Examiner agrees that the “primary winding” of 34 receives “the inverting and non-inverting square outputs of amplifiers 30 and 32”, however, nowhere has Appellant provided any reasoning or any evidence as to why this signal provided to the primary is not “a source of alternating current”. Examiner acknowledges that the reference to Estes, Jr. merely refers to source 12 as “a square wave current signal source”. Estes, Jr. does not state the source 12 alone is “alternating current” and, in fact, it would not appear that such is. However, it would be readily understood by one skilled in the art the clear and necessary purpose for elements 30, 32,

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165 and 166 (also included in the rejection as part of the “source of alternating current power) is to convert the signal from 12 into an alternating current source. Amplifiers 30 and 32 clearly and inherently provide complementary signals. Complementary signals are necessary in order to provide the square wave signal across the primary of 34. Clearly, during the first half of the signal cycle amplifier 30 will provide a high and amplifier 32 will provide a low. During the second half of the signal cycle the outputs will be the inverse. One skilled in the art would readily recognize that the purpose of capacitor 165 and resistor 166 would be to AC couple the signal to the primary. AC coupling will inherently and necessarily remove the DC component for the input signal. By definition, removing the DC component of a signal will cause the signal to be entirely AC (i.e., will have no DC offset).

Additionally, Appellant provides no reasoning or evidence as to why Estes, Jr. “includes no isolation transformer whatsoever”. Nor is this statement even understood. Element 34 is a transformer. As is notoriously well known, the terms, “isolation transformer” and “transformer” are synonyms. All transformers inherently provide isolation.

Appellants next point is in the first paragraph on page 11 stating:

Estes, Jr. does not disclose a feedback control loop comprised of a voltage reference, an output sampler, and an amplifier, said output sampler functioning to provide a scaled sampling of the output voltage of said power line conditioner to a first input of said amplifier.

Examiner initially notes that in the continued discussion in the second paragraph of page 11, as with many portions of the Brief, Appellant discusses the circuit of Fig. 1 of Estes, Jr. However, the rejection is based particularly on the circuit of Fig. 2, not Fig. 1. In contradiction to Appellant’s remarks, each of these discussed elements have been clearly and expressly pointed out in the rejection. Examiner first points out that is notoriously well known that the terms

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“connected” and “coupling” both allow for connection by way of intervening elements. As clearly pointed out in the rejected, the reference to Estes, Jr. includes, “a voltage reference” ground, supplied to the non-inverting input of 175, “an output sampler” 136, 138, 140a, 140b and 168 and an amplifier (175). Clearly, capacitors 140a and 140b operate as a voltage divider to divide a signal provided to buffer 138. Clearly, the signal provided by elements 140a, 140b and 138 would be considered to be “a scaled sampling of the output voltage”. The scaled voltage provided from buffer 138 is clearly provided to the “first input (the inverting input) of said amplifier (175).

Applicant’s third point and discussion is in the third and fourth paragraphs of page 11 as follows:

Estes, Jr. does not disclose an output of said amplifier connected to a first terminal of said first second winding of said isolation transformer. Estes, Jr. includes no isolation transformer, and therefore does not include an amplifier connected to the secondary winding of an isolation transformer, as required by claims 1 and 2.

Again Appellant makes the unsubstantiated statement that element 34 is “no isolation transformer”. For reasons stated above, this statement is not at all understood. Transformer 34 is, in fact, unequivocally an “isolation transformer”. Further, it is clearly shown in Fig. 2 of Estes, Jr. that the output of amplifier 175 is connected, via buffer 138 and resistor 136 to the “first secondary winding (top winding) of said isolation transformer (34)”.

In the fifth and sixth paragraphs of page 11, Appellant provides the fourth point and discussion as follows:

Estes, Jr. does not disclose a second terminal of first second winding of an isolation transformer connected to an input of an output sampler, and which also constitutes the output of a power line conditioner. Estes, Jr. does not include an isolation transformer, and therefore, does not and could not disclose or suggest these elements of claims 1 and 2. Estes, Jr. fails to disclose an AC power line conditioner of any sort, in particular one



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in which a terminal of the second winding is connected to an output sampler and which also constitutes the output of a power line conditioner.

For a third time, Appellant makes the unsubstantiated stated that isolation transformer 34 is not an isolation transformer. Further, contrary to Appellants remarks is clear that the alternating current provided from elements 12, 30, 34, 165 and 166 is a source of power. The mere fact that this current signal is driving the primary winding of 34 would be more than reasonable to consider such to be a power source. The purpose of the circuit of Fig. 2 of Estes, Jr. is to convert the square wave source into a triangle wave output by way of a feedback loop. Clearly, one skilled in the art would deem it reasonable to consider this to be power conditioning. Also, as expressly shown in Fig. 2, “a terminal (the lower terminal of the secondary 34) is connected (at the top terminal of 140a) to an output sampler (constituted by 136, 138, 140a, 140b and 168, as discussed above) and which also constitutes the output of a power line conditioner (VOUT)”.

In the second and third full paragraph of page 12, Appellant provides the fifth point that the reference does not have “a primary winding of an isolation transformer” that “is connected to a first port of the power line conditioner where the first power is also in communication with an AC power source.” In this section, Appellant further reiterates some of the points already refuted above. This remark is not understood. All transformers have an input port (considered the “first port”) at the primary winding. This port is expressly shown by the circles on the primary of transformer.

In the fourth and fifth full paragraph of page 12, Appellant makes a similar point as above only concerning the “second port”. Again, this remark is not understood. All

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transformers have an output port (considered the “second port”) at the secondary winding. This port is expressly shown by the circles on the secondary of transformer.

In the paragraph linking pages 12-13, Appellant summarizes with the accusation of a failure to present a prima facie case of anticipation. However, Examiner contends that the rejection of record as well as the discussion herein provides more than sufficient bases for a prima facie case of anticipation.

In the first full paragraph of page 13, Appellant reiterates the points that “Estes, Jr. does not disclose an output sampler functioning to provide a scaled sampling of the output voltage of said power line conditioner to a first input of said amplifier. As clearly provided above, the elements designated as the output sampler are expressly disclosed and explained as necessarily sampling output VOUT and providing a scaled version of the output, for the output of 138, to the first input of said amplifier.

In the third full paragraph of page 13, Appellant provides the eighth point that Estes does not disclose a voltage reference connected provide a desired voltage to a second input of said amplifier. Examiner responds that it is not clear as to how one can refute considering “ground” to be a reference voltage. In and of itself, ground is in substantially all situations considered to be a reference voltage. Further, ground is being applied to the non-inverting input of amplifier 175. In order to provide the comparison operation, the voltage applied to the inverting is referenced (i.e., compared) to ground. Thus, in the comparison operation provided by amplifier 175, ground would be deemed a reference.


In the first full paragraph of page 14, Applicant provides the final point that “Estes does not disclose an output of said amplifier connected to a first terminal of said first secondary

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winding of said isolation transformer. However, as expressly pointed out above, the output of amplifier 175 is connected by way of 138 and 136 to the first terminal (the top terminal) of the first secondary winding of isolation transformer 35.



For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
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Art Unit 2816

April 19, 2004

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